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BODY STICKING SHEET



BACKGROUND OF THE INVENTION

The present invention relates to a body sticking sheet for application to a body to provide assistance for weakened portions of muscle; and to accelerate
5 cure and recovery of damages in muscle fibers, muscle spasm and the like.

When a human being moves his or her body in daily life, or during sports and the like, muscles may become fatigued, whereby muscle can be affected, and muscle spasm and the like may result. When such tendency becomes pronounced, muscle pain arises, resulting in respective regions in the body being affected, in
10 addition to causing low back pain. Furthermore, physical injuries may occur where strong muscle portions and weak muscle portions appear in the body; and unnecessary stresses are added to the weak portions. With respect to such physical damages and other problems, a treatment for using a fixing tool and fixing an affected area with a bandage support, tape and the like to protect the affected area;
15 and a treatment for suppressing inflammation with anti-inflammatory analgesic plaster and icing to prevent deleterious changes in the affected area are adopted other than by therapies.

On the one hand, usual stiffness in a shoulder or muscle pains, which are common problems in many people, are considered to derive from such major

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causes due to hematogenous disorder or degradation of functions for removing fatigue products derived from decrease in frequency of usage (contraction motion in muscle) in muscle of a region concerned. As to stiffness in the shoulder or muscle pains, treatment for moderating symptoms may include fixing an affected area with a tape, or promoting relaxation of the muscle by means of a magnetic therapeutic instrument, an anti-inflammatory analgesic plaster and the like.

Although a taping treatment is effective in both of these cases, as mentioned above, there may be a case where negative effects, such as disorder of movement, arise as a result of fixing over the peripheral portion of an affected area, whereby the motion of muscle is restricted so far as the taping tape or sheet is adequately applied. Furthermore, when an affected area is excessively fixed, induction of natural healing power is damaged so that a an extended period of time is required until reaching complete cure. Such problems may also be considered to be common in a bandage type supporter.

As a taping tape (including a sheet), a simple product obtained by applying only an adhesive on a backside of a cloth or a similar material having stretchability and a predetermined shape is commonly used. Heretofore, such type of a taping tape has been suggested, wherein the whole of the cloth or the similar material is made of the same raw material and in the same weaving manner, and thus all the area of the taping tape has an even degree of shrinkage. Among them, there is a product which is adhesively applicable to an area having a complicated

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configuration, such as joints of a body without accompanying wrinkles (see Japanese Patent Application Laid-Open No. 2002-35196), or another product which is responsible to complicated motions in joints (see Japanese Patent Application Laid-Open No. 10-192337). However, these products are those
5 having an even degree of shrinkage over the whole surface thereof, respectively.

In the case of taping, it is considered to be desirable that a tape is stuck on an affected area so as to cause muscle to be contracted. In these circumstances, for achieving the above-described ideal stuck conditions of a tape, adjusting a state of tension in every region in the tape is required, and such correct treatment is
10 difficult, so far as a practitioner is a highly skilled person.

When an ordinary person practices such taping, there is a danger that the disorder of movement or the degradation of natural healing power will result, as mentioned above.

The present invention has been made under the conditions as mentioned
15 above. Accordingly, an object of the present invention is to provide a body sticking tape with which everybody can apply a proper taping such that muscle is allowed to contract toward an affected area.

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SUMMARY OF THE INVENTION

A body sticking sheet according to the present invention includes a portion with a small degree of shrinkage applied to an affected area, and a portion with a large degree of shrinkage around the former portion.

5 In the case of taping the body sticking sheet, the portion with a small degree of shrinkage is stuck on the body in a condition wherein it is placed over the affected area. When the body sticking sheet is stuck on the body as described above, the portion with a large degree of shrinkage on the sticking sheet functions to make the muscle around the affected area to be contractive toward the side
10 thereof.

 The body sticking sheet of the present invention exhibits such function so that the muscle around the affected area is allowed to contract toward the side thereof by merely sticking the sheet on a body portion with centering on the affected area, without accompanying a particularly difficult practice. Accordingly,
15 the body sticking sheet of the invention may decrease pains or damages in muscle, and further accelerate natural healing power to achieve early recovery of the damaged muscle. In addition, the body sticking sheet is also effective for assistance of a weak portion of muscle force.

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BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a diagram showing a first example (example 1) of the body sticking sheet;

FIG. 2 is a diagram showing a second example (example 2) of the body sticking sheet;

FIG. 3 is a diagram showing a third example (example 3) of the body sticking sheet;

FIG. 4 is a diagram showing a fourth example (example 4) of the body sticking sheet.

FIG. 5 is a view for showing an applied state of the body sticking sheet of the first example;

FIG. 6 is a view for showing an applied state of the body sticking sheet of the second example;

FIG. 7 is a view for showing an applied state of the body sticking sheet of the third example; and

FIG. 8 is a view for showing an applied state of the body sticking sheet of the fourth example.

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DETAILED DESCRIPTION OF THE INVENTION

A variety of shapes of the body sticking sheet of the present invention in response to a body portion on which the body sticking sheet is to be stuck or symptoms in an affected area may be considered within a range including a basic configuration, wherein a portion with a large degree of shrinkage is disposed around another portion with a small degree of shrinkage, are depicted in the various drawings. FIGS. 1 to 4 show such examples of each modified example, wherein reference characters 1A, 1B, 1C, and 1D designate body sticking sheets, 2 designates each of the portions with each small degree of shrinkage, and 3 designates each of the portions with each large degree of shrinkage. In this case, it may be arranged such that no adhesive is applied on the sheet, but such that the body sticking sheet is stuck on a body by means of a band mounted on the body sticking sheet.

Two types of raw materials having different degrees of shrinkage are combined to form the portion 2 with a small degree of shrinkage and the portion 3 with a large degree of shrinkage, respectively. It is preferred that a degree of shrinkage a of the portion 2 with a small degree of shrinkage is 0% or more, while a degree of shrinkage b of the portion 3 with a large degree of shrinkage is 2 to 20 times higher than that of shrinkage a. Due to a difference between the degrees of shrinkage in both the portions 2 and 3, for example, as shown in FIG. 1, the

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portion 3 with a large degree of shrinkage may be expanded and contracted radially (toward the directions represented by the arrows of dashed lines) with centering on the portion 2 with a small degree of shrinkage. It is preferred that a size of the portion 2 with a small degree of shrinkage is around 5 to 50 mm.

5 Example 1

FIG. 5 illustrates an example wherein the body sticking sheet 1A shown in FIG. 1 is applied to chronic stiffness in the shoulder. A cause for stiffness in the shoulder is considered to be such that opportunities of attollens movement for bringing up the shoulder upwards decrease in working and daily life, whereby
10 contraction of muscle such as cowl muscle, levator scapulae muscle, supraspinatus muscle, semispinalis capitis muscle, splenius capitis muscle and the like is not performed. As a result, a circulation of blood becomes worse, whereby a feed of oxygen and nutritional elements decrease, and the muscle itself
scleroses, resulting in pains in the muscle itself and compression of nerve, head
15 ache and the like, accompanied therewith.

When the body sticking sheet 1A is stuck on the portion of stiffness in the shoulder, contractive motion of the above-described muscles arises, whereby blood flow to an affected portion is promoted to sufficiently feed oxygen and nutritional elements, so that the stiffness in the shoulder is improved. Since a body
20 region where the stiffness in the shoulder appears is positioned on both the front

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and rear sides between a substantially straight line shoulder line, it is preferred to use the rectangular body sticking sheet 1A shown in FIG. 1.

Example 2

FIG. 6 illustrates an example, wherein the body sticking sheet 1B shown in FIG. 2 is applied to a baseball shoulder. A cause for baseball shoulder is considered to be a decrease in muscular function of a muscle group (supraspinatus muscle, infraspinatus muscle, teres minor muscle, and subscapular muscle), referred to by the name of inner muscle. The role of the inner muscle is to maintain stability of shoulder joints, and particularly, it is required for motions (elevating and revolving an arm) of the brachial part. When muscular functions of the inner muscle decreases to lose stability in shoulder joints, stresses are given to the joint portion by means of a muscle group exhibiting remarkable muscle contraction (greater pectoral muscle, cowl muscle, deltoid muscle, and latissimus dorsi muscle) i.e., the outer muscle, whereby inflammation cases in a synovial capsule for smoothening sliding of a tendon, so that pain appears.

When the body sticking tape 1B is stuck on an inner muscle having a small muscle amount, it becomes possible to elevate muscular functions of the inner muscle, whereby the shoulder joint can be stabilized. As a result, cooperativeness between the inner muscle and the outer muscle increases, whereby effects for preventing physical damages and improving mobility in a peripheral portion of the

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shoulder may be obtained. Since a region containing the inner muscle has an outline expanding outwards into a bowl shape, use of a sticking sheet having a shape wherein the portion 3 with a large degree of shrinkage is provided with a notched portion 3a or an incision as in the body sticking sheet 1B shown in FIG. 2 is preferred.

Example 3

FIG. 7 illustrates an example wherein the body sticking sheet 1C shown in FIG. 3 is applied to muscle damage (muscle strain). The muscle damage means a state wherein muscle fibers are torn so that a damaged region of the muscle fibers bleeds. For treatment of the muscle damage, the damaged region is generally iced, and then it is kept quiet in bed. To keep the damaged region quiet in bed brings about regeneration of the muscle to cure the damaged region. On the other hand, however, there is a fear that secondary affection, such as muscle induration and the like as a result of coagulation of blood which bled as a result of the injury may result. Furthermore, there is also a problem that motion of the muscle is restricted, and further, a term for recovery is prolonged.

When the body sticking sheet 1C is stuck on a body in such manner that the portion 2 with a small degree of shrinkage is applied over the damaged region, the muscle around the damaged region contracts toward the side of the damaged region, whereby early removal of the blood bled out and pain producing

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substances is promoted due to a pressure derived from the contraction, to assist regeneration of the muscle, and in addition, the damaged region is protected by the pressure of the contraction. In the case where a body sticking sheet is stuck on the quadriceps muscle, use of the body sticking sheet 1C shown in FIG. 3 having a
5 circular outline is preferred in order to avoid fixing of the muscle over an unnecessary range, to result in disturbance in gait.

Example 4

FIG. 8 illustrates an example wherein the body sticking sheet 1D shown in FIG. 4 is applied to a rupture of the gluteal muscle group, wherein the body
10 sticking sheet having a triangular outline is used, with taking into consideration characteristics of motion in the gluteal muscle group.

Industrial Applicability

The body sticking sheet of the present invention is not limited to a taping product, but it is also applicable to a product on which an anti-inflammatory
15 analgesic plaster, or medicinal properties are applied.